Publishing archaeological data on the web: some models and new directions

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Aims

• Publishing through time
• Nature of data
• Some approaches to publishing data
• Issues (now and in the future)

Publication - an integral part of excavation process

1900-1950: Pitt Rivers Cranbourne Chase. Traditional model has and still shapes policy and practice “Discovery dates from the time of the record…”

1960s and 1970s: crisis, policy is archive rather than the final publication (increased activity, cost, time, theoretically informed).


1990s-2000s: greater variation in publication policy, greater integration between description and interpretation

PUNGS report (2001) – recognised importance of digital

Open Access Landscape – further changes in publication policy may also lead to changes in research practice
The nature of archaeological data

• Wide range of data types
• Data is unique/precious
• We tend to forge our own solutions
• Time and money

Why are we publishing data?

• Telling a story
• Need data for proper criticism
• Need for honest and open discourse

The ideal data publication

• Usable (& understandable)
• Discoverable - accessible to people and machines
• Trusted source (accountability)
• Credit
• Preserved for the future
• Cost
Income

APCs (author charges)
Project income
Donations
Advertising

Articles

Review of Start-Up: An allegedly "radical" and "radical" game

Reviews
Thematic issues

Issue 37: Human Exploitation of Aquatic Landscapes

Issue 39: Critical Blogging in Archaeology

Issue 41: Roman-British Pottery in the Fifth Century

Video

Limited laser and found low-altitude aerial photographic and computer-generated visualization for the interpretation of the complex settlement remains in the area of Jalbire, Ethiopia

Monographs/Excavation reports

- Long form
- Fluid boundaries
- More readable/digestible
- Integration with archives
RTI (Reflectance Transformation Imaging)

A New Record of Pre-Columbian Engravings in Urubki (ES), Brazil using Polynomial Texture Mapping

Philip Bousfield

In the context of evaluating the potential of Reflectance Transformation Imaging (RTI) to record pre-Columbian engravings on rock surfaces, this study explores methods for increasing the quality of data produced. Efficient and robust techniques are required for deriving high-quality, visually-rich content from the recorded visual data. While RTI has been particularly effective for reconstructing visually-rich content, the data recording process can be time-consuming. In the case of rock engravings, the proposed algorithm enables a more robust and efficient recording process. The data produced through this method can be used to animate and visualize the pre-Columbian engravings, thereby providing a more comprehensive view of their potential. In addition to the recorded visual data, the study explores the potential for accelerated aging of formats.

Visualisations/animations

A Unique Engraved Skate Pendant From the Isle of Skye (the oldest Mesolithic art in Britain)

Karin Madsen

In a unique find, a skateboard pendant has been discovered on the Isle of Skye. The pendant, carved from bone, dates back to the Mesolithic period, providing valuable insights into the artistic and cultural practices of this time. The skateboard design is an unusual one, with the skateboard depicted as a symbol of movement and freedom. The pendant was discovered by a team of archaeologists and conservationists, who are currently working to preserve the piece for future generations. The skateboard pendant is currently on display in the National Museum of Scotland, where it can be seen by visitors. The museum has also included other related exhibits to showcase the significance of the skateboard in history and culture.

Virtual worlds

Virtual worlds are digital environments that provide an immersive experience for users. These environments can be used for research and education, as well as for entertainment and social interaction. Virtual worlds are created using computer graphics and other technologies, and they can be accessed through the internet or other networks. These environments can be used to explore and experience different types of virtual spaces, such as virtual cities, virtual landscapes, and virtual experiences. In addition, virtual worlds can be used to create and explore digital content, such as virtual art and virtual games. The use of virtual worlds is becoming increasingly common, and they are being used in a variety of applications, such as virtual reality, virtual tourism, and virtual reality training.

- Preservation challenge
- Reader expectation
- Accelerated aging of formats
Early experiments

Searching for sites created in AD 1790 – 20 years

Spatial data

• Changes in interface
• Active setting
• Software licences
Levels, links and layers

Integrated publication

Publishing data and offering layers

Blurring of boundary between article & archive (narrative & evidence)

Different views of same content

"Window" onto data

Levels, links and layers

A Unique Engraved Stone Pendant from the Site of Star Carr: the oldest Neolithic art in Britain

Stickleby Roman Town Itinerary: The Development of an Urban Property c. AD 60-50 - c. AD 250

Levels, links and layers
Do we still need the structures of print publishing?

Types of online data publication

- Archive
- Project-specific data sharing
- Data sharing as publication
  - http://opencontext.org/
- Data papers/data journals
  - http://intarch.ac.uk/authors/data-papers.html

Project specific data sharing

http://www.catalhoyuk.com/research
Data sharing as publication

Data papers

Reuse

• Publish once, then re-use
• CC BY (open licence)
Archiving

Cheap to store but there is a cost to...

Catalogue data
Clean data
Define data
Archive data
Migrate data

Future issues

• Data vs PDF vs HTML
• Visualisations as data
• Linked open data (LOD)
• Our changing relationship to data. Overburdening the reader?
• Managing expectations
• External forces also shaping change

It pays to be flexible
Conclusions

- Ensure data is reusable (think about formats but also licences)
  - Focus on data that people care about. Publication is not just about new data
- Promote the use/reuse of data
- Rewards
- Preservation - file formats & interfaces
- Digital identifiers: DOI, ORCID, etc

Conclusions

- Make best use of the capabilities of the web
- Collaborative working
- Open access
- A balance of technology and people
- Have funding conversations early
- Culture change

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Further reading

Richards and Winters 2015 Digging into data: Open Access and Open Data http://eprints.whiterose.ac.uk/86312/1/Richards_Winters_PCA5_print.pdf

Richards 2015 Ahead of the curve: adventures in e-publishing in Internet Archaeology
https://doi.org/10.11588/ai.2015.1.26513

Archaeology 2.0, Section III. Archaeological Data Management and Collaboration
http://escholarship.org/uc/item/1r6137tb

Internet Archaeology Data Papers http://intarch.ac.uk/authors/data-papers.html


http://intarch.ac.uk/workshop.html